

## CLOSURE COST ESTIMATE WORKSHEET FOR CONSTRUCTION/DEMOLITION LANDFILL

OWNER: \_\_\_\_\_

PERMIT NO. \_\_\_\_\_

CURRENT PERMIT RENEWAL YEAR: \_\_\_\_\_

CONVERSION FACTOR: 4840.02 SQ. YDS./ACRE

TOTAL PERMITTED AREA: \_\_\_\_\_ ACRES

CONVERSION FACTOR: 0.3333 YDS./FT.

AREA CURRENTLY OPEN: \_\_\_\_\_ ACRES

LARGEST AREA TO EVER BE OPEN AT ANY TIME: \_\_\_\_\_ ACRES  
(use this area for estimating closure costs)

ITEM	QUANTITY	UNITS	UNIT COST	COST	SUBTOTALS
Low Permeability Soil Layer					
Preparation of landfill to receive cover (final grading)		ACRE	\$53.75		
Soil--compacted, off-site		CU. YD.	\$ 5.63		
Soil--compacted, on-site		CU. YD.	\$2.20		
Low Permeability Soil Layer Subtotal					
Vegetative Soil Layer					
Vegetative soil--off-site		CU. YD.	\$5.20		
Vegetative soil--on-site		CU. YD.	\$1.77		
Seeding and mulching		ACRE	\$1,500.00		
Vegetative Soil Layer Subtotal					
Estimated Closure Cost (sum of all subtotals above)					
Administration and Contingency					
Administration and contingency (Estimated Closure Cost x 10%)					
Administration and Contingency Subtotal					
Total Current Closure Costs					

*(Instructions and explanations of bid items and sources of unit costs are provided on the back of this page.)*

Contact Person/Cost Estimate Prepared By: \_\_\_\_\_

Phone Number: \_\_\_\_\_

The minimum final cover requirements for a construction/demolition landfill include a landfill cap consisting of a minimum of 18 inches of compacted soil overlaid by a minimum of 12 inches of soil capable of supporting vegetation. Closure is complete when the cap has been seeded and vegetation is fully established. All estimates submitted must be consistent with the KDHE-approved closure plan.

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## NOTES:

The closure cost estimate should reflect all expenses required for a third party to perform closure activities on your landfill. The closure activities must be based on the largest area ever to need final closure as per State requirements and the specifics of your closure plan. KDHE has supplied some third party unit costs for certain items based on previously submitted estimates, Means Cost Guides (*Environmental Remediation Cost Data-Assemblies*, *Environmental Remediation Cost Data-Unit Price* and *Site Work & Landscape Cost Data*) and other estimates provided to KDHE by contractors. The Means estimates were multiplied by a factor of 0.85 to adjust national averages to locations in Kansas. You may line out the KDHE-supplied unit costs and write in numbers obtained from actual bids for your site or bids from third party contractors. However, please supply KDHE with the source of your unit cost.

Some unit costs are not provided. KDHE could not obtain usable data to establish a unit cost, or the item is too site-specific. The permittee should complete these unit costs based on characteristics of their particular site.

## CLOSURE ITEMS:

### **Low Permeability Soil Layer**

**Preparation of landfill to receive cover (final grading):** Cost includes grading of waste, daily or intermediate cover, and stockpiles to the required base grades and to develop a working surface on which to apply final cover. (Source: Means 18-05-0101)

**Soil--compacted, off-site:** Cost includes purchase of the soil, hauling and spreading of the soil in a minimum of two lifts and compaction. This layer must have a minimum thickness of 18". *Do not include this item if soil is available on-site.* (Source: state-wide average + soil Means 17-03-0424 + compaction Means 226-6000)

**Soil--compacted, on-site:** Cost includes hauling and spreading of on-site materials in a minimum of two lifts and compaction. This layer must have a minimum thickness of 18". (Source: state-wide average + compaction Means 226-6000)

### **Vegetative Soil Layer**

**Vegetative soil--off-site:** Cost includes purchasing and hauling soil to the landfill and spreading of soil capable of supporting vegetation on top of the low permeability layer. *Do not include this item if soil is available on-site.* (Source: state-wide average + soil Means 17-03-0424)

**Vegetative soil--on-site:** Cost includes the loading of on-site soil capable of supporting vegetation and spreading of soil on top of the low permeability layer. (Source: state-wide average from last year's estimates)

**Seeding and mulching:** Cost includes seeding and application of 1" of straw mulch. (Source: state-wide average from last year's estimates)

### **Administration and Contingency**

**Administration and contingency:** Cost should include third party administration of closure and any additional cost contingencies. Assume 10%.